Job Description

Job title: Deputy Director – Bioinformatics

Group: Data, Analytics and Surveillance

Division/Directorate: Bioinformatics / Data Operations

Pay grade/band: SCS1

Line Manager: Director – Data Operations

Location: Colindale

Hours per week: 37

Job type: Permanent

Security level: BPSS

Is there an on-call requirement for this role? N/A

INTRODUCTION

At the United Kingdom Health Security Agency (UKHSA) our mission is to provide health security for the nation by protecting from infectious disease and external hazards. We are a trusted source of advice to government and to the public, focusing on reducing inequalities in the way different communities experience and are impacted by infectious disease, environmental hazards, and other threats to health.

Our mission is challenging, innovative and in the spotlight. We will work to ensure our people have the diverse skills, experiences and backgrounds we need to thrive, that our employees are representative of the communities we serve and feel valued and enabled to play their part in delivering our work.

Creating our working culture is an ongoing process which we are developing by listening and learning together, hearing and acting upon diverse voices and opinions to develop a common sense of identity and effective ways of working.

JOB SUMMARY

Significant developments made during the SARS-CoV-2 pandemic, which generated the have established foundations for the improved use of pathogen genomics to protect public health. This post will provide specialist expertise to drive forwards the bioinformatics component of our core work,

as well as relevant elements of the pathogen genomics programme. The postholder will also work with external specialists and other clinical partners.

This post will be responsible for providing strategic leadership for the bioinformatics function of the UKHSA, as well as operational leadership of the core bioinformatics team within the Data Operations Directorate. The postholder will be responsible for identifying emerging trends, technologies, and tools in microbial genomics and bioinformatics so that the UKHSA stay at the forefront of the field, communicating complex technical concepts, contributing to grant applications and contributing high-level input to data analysis pipelines and interpretation.

The post holder will also undertake the important role of UKHSA Head of Profession for Bioinformatics, working to champion and establish comprehensive communities of practice within UKHSA and across wider professions networks. There is also significant potential for collaboration with academic partners.

MAIN DUTIES AND RESPONSIBILITIES

- Developing and implementing the strategic vision for bioinformatics in alignment with UKHSA's wider goals and in particular its Pathogen Genomics Strategy
- Line management responsibility for the core bioinformatics team
- Delivery of complex projects that require cross Agency engagement and multi-disciplinary working
- Providing a focal point for bioinformatics within the Agency including undertaking the role of Head of Profession for bioinformatics. This will include promoting training, bringing teams together, ensuring that Bioinformaticians across the Agency are aligned to strategic priorities, are following guidelines and working within defined remit
- Identifying emerging trends, technologies, and tools in microbial genomics and bioinformatics to stay at the forefront of the field
- Communicating complex technical concepts to both technical and non-technical stakeholders across all organisation-levels
- Contributing to external presentations and grant applications, and engaging in academic collaborations relevant to genomics and bioinformatics
- Working with external partners to ensure best practice is shared and collaboration are in place to continuously improve the service
- Provide strategic and operational leadership across groups and oversee work of Programme lead to ensure all core bioinformatics projects, including managing timelines, budgets, and resources, while maintaining a high quality of work and analysis
- Contributing high-level input to data analysis pipelines and interpretation
- Collaborating with other teams and wet lab scientists to provide bioinformatics support
- Ensuring that the service provides expert advice for wider public health delivery to internal and external customers.
- Having strategic and operational oversight of the development and maintenance of bioinformatics pipelines and keeping them efficient, accurate, and up to date, while ensuring that best practices are upheld
- Working closely with Data, Analytics and Surveillance colleagues, ensure strategic alignment with the UKHSA Technology Strategy, in the context of data storage, archiving etc and that technology requirements are fit for purpose to support the ongoing Bioinformatics pipelines and requirements

- Ensuring strategic engagement with all parts of the UKHSA that contribute to pathogen genomic surveillance, supporting a "one system" approach, including ensuring sequencing data are available as required

PROFESSIONAL DEVELOPMENT (AMEND IF REQUIRED)

- Identify, discuss and action own professional performance and training / development needs with your line manager through appraisal / individual development plan. Attending internal / external training events and ensuring pursuit of programme of continuous professional development in accordance with any relevant professional registration or statutory requirements
- To participate in all mandatory training as required, i.e. fire safety, information governance and all other mandatory training.

KEY WORKING RELATIONSHIPS

The post holder will develop working relationships and communicate regularly with a wide range of individuals, clinical and non-clinical, internal and external to UKHSA. This will include;

Internal

- Directors and Deputy Directors across
    - Science
    - Clinical and Public Health
    - Technology
    - Health Protection Operations
    - Data, Analytics and Surveillance
- Science Data and Performance Lead
- Relevant colleagues across wider UKHSA

External

- Key academic partners
- Relevant stakeholders within Cabinet Office and HM Treasury, other government departments, non-departmental bodies and potential funding organisations
- Professional leads across HMG
- Relevant stakeholders within identified external data providers and users (public and private sector)
- Devolved Administrations, departments and organisations
- Private sector leaders

Person specification

Please ensure the total number of rows within the knowledge and experience and skills and capabilities headings does not exceed 10. Please only use desirable criteria where necessary.

Assessment will take place with reference to the following information

A - Application	I - Interview	C – Proof of qualification / membership of professional body		T - Test	
Description			Essential	Desirable	Assessment
Qualifications					
A PhD in bioinformatics or microbiology with a heavy bioinformatics component OR MSc / PhD (or equivalent experience) within a life sciences subject such as bioinformatics, biology, medicine, statistics, etc with significant hands-on experience in Computational Biology gained within a relevant setting			✔		A
Knowledge and experience					
5+ years relevant experience			✔		A
Proven leadership and line management skills, demonstrating your ability to guide a team effectively			✔		A/I
A track record of leading the development and implementation of bioinformatics software			✔		A/I
Hands-on experience with genomic sequencing and troubleshooting of bioinformatic pipelines			✔		A/I
Knowledge of microbial whole genome sequencing techniques and tools, including short and long read sequencing			✔		A/I
Familiarity with Illumina sequencing platforms, such as MiSeq and NextSeq, along with expertise in Sanger sequencing			✔		A/I
Proven expertise in transcriptomics, particularly RNA-seq data analysis				✔	A/I
Experience in predicting biosynthetic gene clusters from genomic data				✔	A/I
Prior experience with network analysis and machine learning to analyse large datasets				✔	A/I

Prior experience of working with relational databases, with a focus on MySQL		✓	A/I
Experience with cloud computing, especially Oracle Cloud Infrastructure (OCI)		✓	A/I
Skills / Capabilities/ Behaviours			
Proficiency in Python, Snakemake, and R, showcasing your programming expertise	✓		A/I
Proficiency in containerization, specifically Docker, to streamline data analysis workflows		✓	A/I
Familiarity in translating research bioinformatic techniques into practice (e.g, through UKAS accreditation)		✓	A/I
Familiarity with DevOps / Sysadmin		✓	A/I
Equality and diversity			
An understanding of and commitment to equality of opportunity and good working relationships.	✓		I

Civil Service Success Profiles / Civil Service Competency Framework 2012-2017

As a civil servant your performance and appraisal will be assessed against the civil service core competencies or success profile elements detailed below:

If the Civil Service Competency Framework is to be used - The framework outlines ten competencies, which are grouped into three clusters. A minimum of one competency should be picked from each cluster. It is anticipated that no more than 5/6 in total should be used.

Strategic cluster – setting direction:	People cluster – engaging people:	Performance cluster – delivering results:
1. Seeing the big picture 2. Changing and improving	1. Leading and communicating 2. Collaborating and partnering 3. Building capability for all	1. Managing a quality service

If the Civil Service Success Profiles are to be used a minimum of 2 elements should be identified for selection. Whilst behaviours may not be chosen for selection, a minimum of three behaviours should be identified as being relevant to the role to support the performance and appraisal process.

ADDITIONAL INFORMATION

In addition to the job specific requirements above this role will require adherence to the following:

Performance Development and Appraisal

All employees are required to partake in a monthly and quarterly review of their work. The process is described here: Personal development - Performance development and appraisals (ukhsa.gov.uk)

Code of conduct and revalidation process for professionally qualified employee groups

All employees are required to work in accordance with their professional group's code of conduct and revalidation process as appropriate and relevant to their role (e.g. NMC, GMC, Department of Health Code of Conduct for Senior Managers, CIPD, etc).

Information governance

UKHSA processes (collects, uses and shares) large volumes of data and information of different types and forms, including personal data about identifiable individuals. Information governance (IG) is about managing the risks to the confidentiality, integrity and availability of all this data and information.

UKHSA data and information must be managed in accordance with the requirements of data protection and related law, and best practice standards and guidance. As an employee, you are responsible for:

1)   protecting the confidentiality of UKHSA data and information by:

- complying with the Data Protection Act 2018 (incorporating the General Data Protection Regulation)

- complying with the common law duty of confidentiality, the Caldicott Principles and the NHS Code of Practice on Confidentiality when processing personal data

- complying with the policies, procedures and guidance in place to protect the confidentiality of UKHSA data and information, for example by:

- only accessing the UKHSA data and information you have approval to use for your role, and not sharing this access to UKHSA data and information with anyone else

- not attempting to circumvent the managerial, procedural and technical security controls in place to protect UKHSA data and information

- not processing UKHSA personal data outside UKHSA office sites without approval

2)   complying with the policies, procedures and guidance in place to protect the integrity (in other words, the accuracy and completeness) of UKHSA data and information, for example by:

- only altering UKHSA data and information if you have approval to do so as part of your role

3)   complying with the policies, procedures and guidance in place to protect the availability of UKHSA data and information, for example by:

- complying with the policies, procedures and guidance on the secure and acceptable use of UKHSA ICT systems and equipment

4) complying with the law and UKHSA policies, procedures and guidance on the management of records, including the proper use of the Government Security Classifications.

5) reporting incidents affecting the confidentiality, integrity and availability UKHSA data and information, for example, unauthorised access to UKHSA data and information, or the loss or compromise of UKHSA ICT systems or equipment

6) completing the annual information governance training appropriate to your role

UKHSA reserves the right to monitor your access to UKHSA data and information, including your use of UKHSA ICT systems and equipment, in order to assure your compliance with data protection and related law, and with the UKHSA policies, procedures and guidance in place to support this.

Failure to comply with these requirements may result in disciplinary action being taken, and sanctions being applied up to and including your dismissal.

You are personally accountable for deliberate or avoidable data protection breaches. Failure to comply with the Data Protection Act 2018 may result in you being reported by UKHSA to the Information Commissioner's Office, which may lead to criminal prosecution.

Conflict of interests
UKHSA employees must not use their official position, or any information obtained through their role in UKHSA to further their private interests or the interests of others. This means any circumstances where there is, or could be perceived to be, a conflict of interest between the individual's role in UKHSA and any other business or private capacity interests that they are involved with, where the other interests could influence how an individual carries out their role.

In accordance with UKHSA Code of Conduct Policy, and based on the requirements set out in the Civil Service Code, the Civil Service Management Code,, you must declare all Outside Interests, both before commencing in-post and within ten working days of any addition or change. Outside interests, be they business, hobby or trade, must not compromise or conflict with the appointment and role in UKHSA.

A key test of whether an Outside Interest could be perceived to be a conflict of interest is where there is a risk that a fair-minded outside observer, acting reasonably, would conclude that there is a real possibility of bias.

A Conflict of Interest Declaration Form must be completed when joining the department and If there is the possibility of a conflict of interest whilst in-post. You must also inform your Line Manager whenever you make a declaration/register an interest.

In addition, the Policy requires you to declare all situations where you or a close relative or associate has a controlling interest in a business (such as a private company, public or voluntary organisation) or in any activity which may compete for any contract to supply goods or services to UKHSA. You must register such interests with UKHSA, either on appointment or within ten working days of whenever such interests are acquired.

You should not engage in these activities or outside employment without the written consent of UKHSA, which will not be withheld unreasonably. It is your responsibility to ensure that you are not placed in a position that may give rise to a conflict between your private interests and your UKHSA duties and that these do not bring, or potentially bring, UKHSA into disrepute.

Diversity

An important part of our mission at the UKHSA is to help reduce health inequalities across the UK. The Covid-19 pandemic highlighted how certain groups are impacted negatively by health inequality, and we want to ensure we learn from these challenges. To do that effectively we need to continue building a talented workforce that represents the diversity of our population. Our ethos is to be an inclusive organisation for all our employees and stakeholders, where differences drive innovative solutions to meet the needs of our workforce and wider communities. This in turn produces more accountable and trusted public services and better decisions; better because they are more attuned to the needs and interests of all our communities, helping to address inequality. We are committed to ensuring our culture and ways of working allow all of our people to thrive at work.

Emergency Response

Given the nature of the work of UKHSA, as a Category 1 responder, you may be required in an emergency, if deemed a necessity, to redeploy to another role at short notice. You may also be required to work at any other location, within reasonable travelling distance of your permanent home address, in line with the provisions set out in your contract of employment.

Health and safety

You must co-operate with management in discharging its responsibilities under the Health and Safety at Work Act 1974 and take reasonable health and safety of yourself and others and ensure the agreed safety procedures are carried out to maintain a safe environment for service users, employees and visitors.

Centre/divisional directors - are responsible for coordinating health and safety activities in their centres/divisions and will determine the necessary management structure and arrangements. Directors will ensure that their actions and decisions at work reinforce the requirements of UKHSA's health and safety policy and arrangements.

Managers - are responsible for implementing the organisation's health and safety policies and arrangements and for ensuring that risk assessments, safe systems of work, control measures and employee training are up to date and effective. Managers will inspect premises, ensure accidents and incidents are reported/investigated and assist in auditing health and safety management arrangements.

All employees must comply with any health and safety training: report all accidents, incidents, illnesses and untoward occurrences to line management without undue delay and must not interfere with or misuse anything provided in the interest of the health, safety and welfare of other employees.

Risk management

All employees have a responsibility to report all clinical and non-clinical accidents or incidents promptly and, when requested, to co-operate with any investigation undertaken.

Safeguarding Children and Vulnerable Adults and Disclosure and Barring Service (DBS) (If applicable)

If the post holder is required to have contact with vulnerable adults or persons under the age of 18 then the post holder will be subject to a criminal record check from the Disclosure and Barring Service prior to the appointment being confirmed. The disclosure will include details of cautions, reprimands, and final warnings, as well as convictions if applicable. All employees must be familiar with and adhere to the UKHSA child protection and safeguarding adult and children policies and procedures. Employees must comply with all statutory legislation and guidance relating to safeguarding children and vulnerable adults. All employees are required to attend child protection and safeguarding adults awareness training, additional training and supervision regarding child protection relevant to their position and role.